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(54) **RADIAL POWER DIVIDER/COMBINER**

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This patent is subject to a terminal disclaimer.

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(58) **Field of Classification Search** ..... 333/100, 333/125, 127–128, 136–137; 330/56, 66, 330/124 R, 286, 295

See application file for complete search history.

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(57) **ABSTRACT**

A radial power divider-combiner is disclosed. The divider-combiner includes a divider and a combiner. An input signal is provided to a transmission antenna that radiates the input signal inside the divider. Within the divider, the input signal is divided into a plurality of individual signals. The individual signals are received by receiving antennas and provided to respective amplifiers. The amplifiers amplify the respective individual signals by a desired amplification factor. The amplified individual signals are provided to a plurality of transmitting antennas within the combiner. Inside the combiner, the amplified individual signals are combined to form an output signal that is received by a receiving antenna in the combiner.

13 Claims, 8 Drawing Sheets